

COMMUNITY AFFAIRS

Division Of Codes And Standards Liquefied Petroleum Gas Regulations Update of Referenced Standards

Proposed Amendments: N.J.A.C. 5:18-1.6, 3.1, 3.3, 3.4, 3.6, 5.1, 5.3, Appendix A

Authorized By: Susan Bass Levin, Commissioner, Department of Community Affairs.

Authority: N.J.S.A. 21:1B-2 and -13.

Calendar Reference: See Summary below for explanation of exception to calendar requirement.

Proposal Number: PRN –

Submit written comments by September 30, 2005 to:

Michael L. Ticktin, Esq.
Chief, Legislative Analysis
Department of Community Affairs
PO Box 802
Trenton, New Jersey 08625
Fax No. (609) 633-6729
E-mail: mticktin@dca.state.nj.us

SUSAN BASS LEVIN,

COMMISSIONER

A **public hearing** on this proposal will be held on September 13, 2005 at 10:00 a.m. at the Department of Community Affairs, 101 South Broad Street, Trenton, New Jersey. Persons wishing to testify at this hearing are requested to write to Cynthia Cordero at PO Box 802, Trenton, NJ 08625, or by calling (609) 292-7899, in order to

facilitate scheduling. Persons with disabilities who require special accommodations are requested to contact Ms. Cordero at least two weeks prior to the hearing date.

Summary

The proposal updates the editions of National Fire Protection Association (NFPA) 58 and American Petroleum Institute (API) standards referenced in the Liquefied Petroleum Gas Regulations. NFPA-58 is the primary technical document upon which the LP-Gas regulations are based. The amendments remove administrative requirements from the standard which are duplicated in N.J.A.C. 5:18, and they amend compliance dates for requirements that are phased in by NFPA-58, since the adoption date of the standard is well after the published date by NFPA. Finally, the amendments make the standard consistent with other state regulations such as the Uniform Construction Code, N.J.A.C. 5:23, and the Uniform Fire Code, N.J.A.C. 5:70.

In September of 2004, Deputy Fire Chief Jim DeHurn was killed responding to a fire when a propane cylinder that was stored inside the building caused a flash fire. The current adopted edition of NFPA-58 requires that propane cylinders be provided with warning labels that indicate the hazards associated with propane. However, the requirement does not specify what hazards have to be identified nor does it specify the language that must be on the label. Many labels that have been used contain a long list of warnings. Because of the amount of information contained on the label, they do not give the consumer an effective warning about bringing propane tanks into buildings. Because of the significant risk associated with bringing LP-Gas cylinders inside of buildings, the

Department believes that a separate decal highlighting the danger is appropriate. Accordingly, included in this proposal is a requirement to label propane cylinders with a warning not to bring the tank indoors. The labels would be printed in English and in Spanish.

A section-by-section explanation of the amendments follows:

Section 1.3.1 and 1.3.2 are deleted because they deal with the scope of the standard. The scope of the standard is already defined in N.J.A.C. 5:18.

Section 1.4.2 and 1.4.3 are deleted because they deal with application of the standard to existing installations. N.J.A.C. 5:18-1.1(c) is specific about how the rules are to apply to existing installations.

Section 2.3.1 is amended to reference a later edition of API 620. Conversations with NFPA staff indicated the edition was not updated because of an oversight.

Section 3.2.2 The definition of “Authority Having Jurisdiction” is deleted since the Bureau is the only party responsible for enforcement of NFPA-58 adopted under N.J.A.C. 5:18.

Section 4.3.1 and 4.3.2 are deleted because they deal with notification of installations that is already covered by N.J.A.C. 5:18.

Section 5.2.2.1 is deleted because it covers the transportation of cylinders which is outside of the scope of N.J.A.C. 5:18.

Section 5.2.3.1 is amended to add a phase-in date for the requirement. Previous editions of the standard were not clear on the need to requalify DOT cylinders that are used in stationary service. Requalification has not been the practice in New Jersey.

Without some type of phase-in date, the requirement would impose a hardship on the industry, since cylinders cannot be filled if they have not been requalified. This could result in some customers being without gas service. The proposed rule provides a four-year period to have existing tanks requalified.

Sections 5.7.7.2(C), (D), (G) and (H) are amended to stagger compliance dates for adding additional emergency shutoff valves that are meant to protect against spillage of liquid propane from damaged piping.

Sections 5.18.6 and 5.18.7 are deleted because they deal with the installation of appliances which is outside of the scope of N.J.A.C. 5:18.

Sections 6.3.1, 6.3.3, 6.3.4.2, and 6.3.4.3 are all amended to delete the words “that can be built upon.” The distances from property lines for LP-Gas should be maintained even in cases where the adjoining property cannot be built upon.

Section 6.4.5.12 is amended to change the voltage threshold for prohibiting electric lines that are installed above or adjacent to an LP-Gas tank from 600 volts to 240 volts. This change is made for consistency with N.J.A.C. 5:18 – 3.3(n).

Section 6.6.7 is deleted because the Department does not believe that the storage of LP-Gas containers on roofs of buildings is a prudent practice.

Section 6.8.4.6 is amended to make the gage of the tracer wire consistent with the Uniform Construction Code. The Department does not feel that it is sensible to have two different tracer wire requirements in rules that are promulgated by the same Department.

Section 6.9.1 is amended to move the compliance date back for the need to have internal valves that operate both remotely and automatically. Since the Department is adopting the standard that requires this type of activation long after the requirement was

first published in NFPA-58 (spring of 2001), it is reasonable to give owners additional time to comply.

Section 6.17.1.1(1) is deleted and replaced with a reference to the Uniform Construction Code and to the Uniform Fire Code. The Uniform Fire Code contains provisions for the storage of LP-Gas cylinders on balconies.

Section 6.17.1.2(C) is deleted because the Department does not believe that the practice of storing LP-Gas containers on roofs of buildings is prudent.

Section 6.17.2 is deleted because the use and storage of propane within buildings is not under the scope of the rules.

Section 6.17.3 is amended to reference the Uniform Construction Code and the Uniform Fire Code for the installation of cylinders, piping and appliances within buildings.

Section 6.17.4.2 is deleted and the appropriate reference to the Uniform Fire Code is substituted for the use of propane in buildings under construction.

Section 6.17.11 is deleted because the Department does not believe that the practice of storing LP-Gas containers on roofs of buildings is prudent.

Table 6.19.3.6 is amended to make it clear that the distance requirements apply to all lot lines not just lots that can be built upon.

Section 6.21 is deleted because it contains requirements for LP-Gas systems on vehicles that are outside of the scope of the rules.

Section 8.3 is deleted because it contains requirements for the permissible storage of LP-Gas in buildings. For new building construction, this is subject to the Uniform

Construction Code; for existing buildings, the Uniform Fire Code establishes the permissible storage of LP-Gas within buildings.

Sections 8.4.1.1(1) and 8.4.1.1(2) are amended to increase the distance requirement between building doors and LP-Gas cylinder exchange cabinets to 20 feet to be consistent with the requirements of the Uniform Fire Code.

Chapter 9 is deleted because it covers the transportation of LP-Gas. Section 9.7, which gives guidance on the storage of LP-Gas cargo vehicles, is retained. The Department believes that the storage of LP-Gas trucks is a public safety concern and is retaining these requirements.

Chapter 11, which covers LP-Gas engine fuel systems, is deleted because it is outside of the scope of N.J.A.C. 5:18.

N.J.A.C. 5:18-1.6, 3.4, and 3.6 are amended to include the new requirements for cylinder warning labels.

N.J.A.C. 5:18 – 3.3, and 3.6 are amended to update the edition of NFPA-58 from 1998 to 2004. In addition, Section 5.1 is amended to update the edition of API-2510 from 1995 to 2001 and to update the edition of NFPA-58 from 1998 to 2004.

N.J.A.C. 5:18-5.3 is amended to adopt the 2001 edition of API-2510.

There are four significant differences between the 1998 edition of NFPA 58 and the 2004 edition, proposed for adoption by reference. They are as follows:

(1) The newer edition includes a requirement for the requalification of tanks in stationary service. As stated above, this proposal includes a compliance date that offers marketers time to comply with this requirement.

(2) The newer edition requires that tanks be equipped with internal valves that operate both remotely and automatically. Again, as stated above, this proposal includes a compliance date that offers marketers sufficient time to comply with this new requirement.

(3) The new edition allows for the use of polyamide pipe for LG gas service.

(4) The newer edition requires that a fire protection analysis, describing means of prevention and incident preparedness, be prepared for all system with a capacity over 4,000 gallons.

There are no significant differences between the 1995 edition of API-2510 and the 2001 edition proposed for adoption by reference.

Appendix A is modified to update the list of referenced standards in accordance with the amendments above.

Because a 60-day comment period is provided on this notice of proposal, this notice is excepted from the rulemaking calendar requirement pursuant to N.J.A.C. 1:30-3.3(a)5.

Social Impact

The proposal will help ensure public safety by using the latest industry recognized safety standards. The proposed amendments will also benefit the regulated parties by coordinating the adoption of NFPA-58 with other rules, such as the Uniform Construction Code and the Uniform Fire Code. The proposed amendments for cylinder labeling requirements would help prevent injuries from storing tanks indoors.

Economic Impact

The Department anticipates the majority of changes between the previously adopted edition of NFPA-58 and the proposed version would not result in any economic impact. There are two changes, however, that would have some impact. One is a requirement that DOT cylinders that are in stationary service be requalified, just as DOT cylinders that are in use in transportation of LP-Gas are required to be requalified by the U.S. Department of Transportation. Such a requirement would mean that DOT cylinders in use at buildings would have to be disconnected and inspected periodically. In most cases, this would be done by the companies that supply LP-Gas. The manpower and tracking needed to do this would have some economic impact on the LP-Gas suppliers. However, at this time, the Department believes that this cost would be justified, given the overwhelming support for the change at NFPA.

Another change in the newer edition of NFPA-58 requires the installation of safety shutoff valves at the tank for larger installations. These installations are primarily bulk facilities where suppliers load delivery trucks. While the code has traditionally required shutoffs to protect hose connections in the event of a breakaway, the new rules require emergency shutoff valves that would protect against a break in nearly all of the piping associated with the installation. The requirement is being phased in over a six year period so that the cost can be amortized over that period.

Federal Standards Statement

No Federal standards analysis is required because this amendment is not being proposed in order to implement, comply with, or participate in any program established

under Federal law or under a State law that incorporates or refers to Federal law, standards, or requirements.

Jobs Impact

The Department does not anticipate that the proposed amendment would result in the creation or loss of any jobs.

Agriculture Industry Impact

The Department does not anticipate that the proposed amendment would impact the agriculture industry.

Regulatory Flexibility Analysis

No recordkeeping or reporting requirements are established by these amendments. Most of the forty-seven currently licensed propane companies would qualify as "small businesses," as defined in the New Jersey Regulatory Flexibility Act, N.J.S.A. 52:14B-16 et seq. By ensuring that the provisions set forth in the Liquefied Petroleum Gas Regulations are up to date, consistent with other New Jersey codes, and are clear, these proposed rules would set standards that would apply to all propane companies regardless of their size. Compliance with the LP-Gas rules is required of all businesses that undertake the sale or installation of propane systems subject to the rules in order to protect public safety. No professional services would be required in order to comply with the amended rules.

Smart Growth Impact

The proposed amendment would have no impact upon either the achievement of "smart growth" or the implementation of the State Development and Redevelopment Plan.

Full text of the proposal follows (additions indicated in bold face thus; deletions indicated in brackets [thus]):

5:18 –1.6 Container Markings

(a) – (d) (No change.)

(e) Prior to filling any cylinder of 4 to 40 lbs LP-Gas capacity, except fork lift cylinders, the operator of the fill plant or distribution plant shall affix a label to the collar of the cylinder that includes the following warning printed in English and in Spanish: “Flammable Gas – Never Use or Store Indoors/ Gas Inflamable – Nunca Se Use o Guarde Adentro.”

Subchapter 3 – NFPA [No.] 58 Systems

5:18 – 3.1 Standards Adopted by Reference

(a) The Liquefied Petroleum Gas Code, “NFPA 58- [1998] **2004**,” is hereby adopted by reference [except that] with the following modifications:

[1. Subsections 1-1.2 and 1-1.3, Section 1-4, Subsection 3-2.5, Chapter 6 and Chapter 8 shall not apply; and,

2. The phrase that can be built upon is deleted.

3. Only technical standards relating to public health and safety are adopted by reference. The administrative and reporting procedures of the referenced standard are not adopted and are replaced with the administrative provisions of this chapter.]

1. The following amendments are made to Chapter 1 of NFPA 58 entitled

“Administration”:

- i. Section 1.3.1 is deleted.
 - ii. Section 1.3.2 is deleted.
 - iii. Section 1.4.2 is deleted and the requirements of N.J.A.C. 5:18-1.1(c) shall be substituted in lieu thereof.
 - iv. Section 1.4.3 is deleted and the provisions of N.J.A.C. 5:18 –1.1(c) shall be substituted in lieu thereof.
2. The following amendments are made to Chapter 2 of NFPA 58 entitled “Referenced Publications”
- i. Section 2.3.1 is amended to delete the year 1996 at the end of the listing for API 620 and to substitute in lieu thereof 2002.
3. The following amendments are made to Chapter 3 of NFPA 58 entitled “Definitions”:
- i. The terms and definition of “Authority Having Jurisdiction” is deleted. Substitute in lieu thereof, “The Bureau of Code Services is the authority having jurisdiction unless otherwise noted.”
4. The following amendments are made to Chapter 4 of NFPA 58 entitled “General requirements”:
- i. Section 4.3.1 is deleted.
 - ii. Section 4.3.2 is deleted.
5. The following amendments are made to Chapter 5 of NFPA 58 entitled “LP-Gas Equipment and Appliances”:
- i. Section 5.2.2.1 is deleted.

- ii. Section 5.2.3.1 is amended to add the phrase “After January 1, 2009,” before the words “DOT cylinders in stationary service” on the first line.
 - iii. Section 5.7.7.2 (C) is amended to replace the date “July 1, 2003” with “July 1, 2007.”
 - iv. Section 5.7.7.2(D) is amended to replace the date “July 1, 2011” with “July 1, 2015”
 - v. Section 5.7.7.2 (G) is amended to replace the date “July 1, 2003” with “July 1, 2007.”
 - vi. Section 5.7.7.2 (H) is amended to replace the date “July 1, 2011” with “July 1, 2015.”
 - vii. Section 5.18.6 is deleted.
 - viii. Section 5.18.7 is deleted.
- 6. The following amendments are made to Chapter 6 of NFPA 58 entitled “Installation of LP-Gas Systems:”
 - i. Section 6.3.1 is amended to delete the words “that can be built upon” on lines 5 and 6.
 - ii. Section 6.3.3 is amended to delete the words “that can be built upon” on line 4.
 - iii. Section 6.3.4.2 is amended to delete the words “that can be built upon” on line 3.
 - iv. Section 6.3.4.3 is amended to delete the words “that can be built upon” on line 3.

- v. Section 6.4.5.12 is amended to delete the words “600 volts, nominal” and replace them with the words “240 volts nominal.”
- v. Section 6.6.7 is deleted.
- vi. Section 6.8.4.6 is amended to replace the term “(minimum AWG 14)” with the term “(minimum AWG 18).”
- vii. Section 6.9.1 is amended to replace the date “July 1, 2003” with “July 1, 2007.”
- viii. Section 6.17.1.1(1) is deleted and the following language is substituted, “The storage of LP-Gas cylinders on exterior balconies of buildings shall be in accordance with the Uniform Construction Code (N.J.A.C. 5:23) and the Uniform Fire Code (N.J.A.C. 5:70).”
- ix. Section 6.17.1.2 (C) is deleted.
- x. Section 6.17.2 is deleted.
- xi. Section 6.17.3 is deleted and the following language is added: “The installation of piping and appliances within buildings shall conform to the Uniform Construction Code (N.J.A.C. 5:23). The installation of LP-Gas tanks on roofs of buildings except while under construction shall be prohibited. The installation of propane storage containers, piping and appliances on exterior balconies shall be in accordance with the Uniform Construction Code and the Uniform Fire Code (N.J.A.C. 5:70) as applicable.”
- xii. Section 6.17.4.2 is deleted and the following language is substituted “The storage and use of LP-Gas in buildings that are under construction and partially

occupied shall be approved by the authority having jurisdiction under the Uniform Fire Code (N.J.A.C. 5:70).”

xiii. Section 6.17.11 is deleted.

xiv. Table 6.19.3.6 is amended to delete the words “that can be built” on line 6 under the heading “Exposure”

xv. Section 6.21 is deleted.

7. The following amendments are made to Chapter 8 of NFPA 58 entitled “Storage of Cylinders Awaiting Use, Resale, or Exchange:”

i. Section 8.3 is deleted and the following language is substituted, “The storage of LP-Gas in buildings shall be in accordance with the Uniform Fire Code (N.J.A.C. 5:70) and Uniform Construction Code (N.J.A.C. 5:23) as appropriate.”

ii. Section 8.4.1.1 (1) is amended to replace the distance “5 ft” with “20 ft”

iii. Section 8.4.1.1 (2) is amended to replace the distance “10 ft” with “20 ft.”

8. Chapter 9 of NFPA 58, with the exception of 9.7 on the parking and garaging of vehicles used to carry LP-Gas, entitled “Vehicular Transportation of LP-Gas,” is deleted.

9. Chapter 11 of NFPA 58 entitled “Engine Fuel Systems” is deleted.

(b) Where any conflict occurs between the standards prescribed in (a) above and these rules, these rules shall prevail.

5:18 – 3.3 Container Storage

(a) (No change.)

- (b) Containers installed outside of buildings shall be located with respect to property lines other than public ways, buildings, or bulk storage of hazardous materials in accordance with Table [3-2.2.6] **6.3.1** of the Liquefied Petroleum Gas Code, NFPA No. 58 – [1998] **2004**.
1. The term “buildings” as used in this subsection shall not be construed to include the buildings described in paragraph [3-2.2.2] **6.3.5** of the referenced standard.
 2. The term “hazardous materials” as used in this subsection shall recognize the specific requirements for the specific hazardous materials described in paragraphs [3-2.2.7(e) and (f)] **6.4.5.5, 6.4.5.6 and 6.4.5.8** of the referenced standard.
- (c) Containers installed outside of buildings shall be located with regard to the near side of a public way in accordance with the schedule of aboveground containers of Table [3-2.2.2] **6.3.1** of Liquefied Petroleum Gases, NFPA No. 58 – [1998] **2004**, as provided below:
- 1.– 2. (No change.)
- (d) (No change.)
- (e) Installations of LP-Gas systems with aboveground containers of 90,000 gallons individual or aggregate water capacity or more that present a serious exposure hazard shall be protected by one of the following: distances at least 50 percent greater than the schedule of aboveground containers of Table [3-2.2.2] **6.3.1** of Liquefied Petroleum Gas Code, NFPA 58 – [1998] **2004**, water spray protection, fixed monitors, or insulation.

- (f) If more than six containers, each of which is of 2000 gallons water capacity or more, are used at a single site, the containers shall be separated into batteries of not more than six containers with batteries separated from each other by the distances required for the schedule for mounded or underground containers of Table [3-2.2.2] **6.3.1** of Liquefied Petroleum Gas Code, NFPA No. 58 – [1998] **2004**.
- (g) – (r) (No change.)

5:18 –3.4 Distributing Points, Distribution Plants, and Industrial Plants

- (a) – (l) (No change.)

(m) Prior to filling any cylinder of 4 to 40 lbs LP-Gas capacity, except fork lift cylinders, the operator of the fill plant or distribution plant shall mark the cylinder in accordance with N.J.A.C. 5:18-1.6(e), Container Markings.

5:18 –3.6 Cylinder Exchange Cabinets

- (a) In addition to complying with the requirements of Chapter [5] **8** of the Liquefied Petroleum Gas Code, NFPA No. 58 –[1998] **2004**, the operator of every location providing LPG cylinder exchange cabinets shall:

1.– 4. (No change.)

5. Comply with the maximum cylinder size and distance requirements specified in NFPA-58/[1998] **2004** edition, Table [5-4.1] **8.4.1.2**;

6– 9. (No change.)

10. Ensure that, when exchanging cylinders, the employee affixes a label to the collar of the cylinder that includes the following warning printed in

**English and in Spanish: “Flammable Gas – Never Use or Store Indoors/ Gas
Inflamable – Nunca Se Use o Guarde Adentro.”**

5:18-5.1 Standards Adopted by Reference

(a) API 2510- [1995] **2001**, “Design and Construction of Liquefied Petroleum Gas (LPG) Installations,” is hereby adopted by reference for the design and construction of liquefied petroleum gas (LPG) installations at marine and pipeline terminals, refineries petrochemical plants and tank farms, except that:

1. – 2. (No change.)

3. NFPA 58 – [1998] **2004** may be used as the standard for those areas not specifically addressed by API 2510 – [1995] **2001**, provided that the provisions of NFPA 58 do not conflict with the intent of API 2510 – [1995] **2001**.

(b) (No change.)

5:18 – 5.3 Container Storage

(a) Siting of containers shall conform with section [3] **5** of API 2510-[1995] **2001**.

(b) – (e) (No change.)

Appendix A

No. and Edition

Title

API-2510-[1995] **2001**

American Petroleum Institute 2510-[1995] **2001**,

Design and Construction of Liquefied Petroleum
Gas Installations

NFPA No. 58 –[1998] **2004**

Liquefied Petroleum Gas Code
